

WHAT IS CLAIMED IS:

1. A method for modeling the utilization of substantially all of an emitted beam of a lamp in a lighting fixture by a gobo which is not necessarily the same diameter as a barrel of the fixture, said method comprising:

5 computing a placement of a point source of light inside said lighting fixture to yield a specified beam angle; and

 computing a placement of said gobo in front of said lighting fixture so the diameter of said gobo matches the diameter of said emitted beam emerging from said fixture.

10

2. A method for modeling a lighting system, said method employing a computing system having graphic a display, said method comprising:

 entering and storing lighting fixture data into said computing system,

 entering and storing fixture support data into said computing system;

15 entering and storing guide data into said computing system, said guide data including the types and locations of fixture supports and lighting fixtures;

 computing from said guide data a two or three dimensional representation of said lighting system; and

 displaying said representation on said graphic display.

20

3. A method for automatically constructing a relatively complex representation of an object based on a relatively simple representation of an object, comprising:

 generating a relatively simple representation of an object; and

25 building a link between said relatively simple shape representation and a relatively complex representation of an object stored in a library.

4. The method of claim 3 wherein said building comprises opening a dialog box and completing information in said dialog box identifying a link between said

30 relatively simple representation of an object and said relatively complex representation of an object.

5. The method of claim 3 and further including repeating the steps of generating a relatively simple representation of an object and building a link an additional one or more times.

5 6. The method of claim 3 and further including storing said link.

7. The method of claim 4 and further including storing each of said links.

8. The method of claim 3 and further including recalling said link.

10

9. The method of claim 5 and further including recalling one or more of said links.

10. A system for modeling the utilization of substantially all of an emitted beam of a lamp in a lighting fixture by a gobo which is not necessarily the same diameter as a barrel of the fixture, said system comprising:

means for computing a placement of a point source of light inside said lighting fixture to yield a specified beam angle, and

means for computing a placement of said gobo in front of said lighting fixture so the diameter of said gobo matches the diameter of said emitted beam emerging from said fixture.

11. A system for modeling a lighting system, employing a computing system having a graphic display, said system comprising:

25 means for entering and storing lighting fixture data into said computing system;

means for entering and storing fixture support data into said computing system;

means for entering and storing guide data into said computing system, said guide data including the types and locations of fixture supports and lighting fixtures;

30 means for computing from said guide data a two or three dimensional representation of said lighting system; and

means for displaying said representation on said graphic display.

12. A system for automatically constructing a relatively complex representation of an object based on a relatively simple representation of an object, comprising:

- means for generating a relatively simple representation of an object, and
- 5 means for building a link between said relatively simple representation and a relatively complex representation of an object stored in a library.

13. The system of claim 12 wherein said means for building comprises means for opening a dialog box and means for completing information in said dialog box

10 identifying a link between said relatively simple representation of an object and said relatively complex representation of an object.

14. The system of claim 13 and further including means for storing said link.

15 15. The system of claim 13 and further including means for recalling said link.

16. A method for automatically constructing arrays of complex shapes based on simple shapes, said method employing a computing system having graphic display means, data entry means, data processing means and a memory, said method comprising

20 the steps of:

- entering and storing said complex shapes into said computing system,
- entering and storing shape translation data into said computing system,
- entering and storing said simple shapes into said computing system;
- computing said arrays of complex shapes based on the parameters of said simple
- 25 shapes; and
- displaying said arrays of complex shapes on said monitor.